BookletChart™

Lake Michigan
NOAA Chart 14901

A reduced-scale NOAA nautical chart for small boaters
When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA’s Office of Coast Survey, the nation’s chartmaker

Included Area
Fluctuations of water level.—The normal elevation of the lake surface varies irregularly from year to year. During the course of each year, the surface is subject to a consistent seasonal rise and fall, the lowest stages prevailing during the winter and the highest during the summer.

Weather, Lake Michigan.—Gales are most likely from September through April, particularly in the fall. During this season gales blow 3 to 7 percent of the time; speeds of 28 knots or more occur from 12 to 20 percent of the time. Strong winds often blow out of the W and northwest, making east shore harbor entrances dangerous. The strongest measured over-the-lake wind was out of the west-southwest at 58 knots. Spring winds can blow strong, with winds of 28 knots or more about 4 to 8 percent of the time. They do slacken from their winter fierceness, with southerlies and southwesterlies becoming more frequent and northerlies less so as summer approaches. Strong winds are infrequent in summer and mostly associated with thunderstorms. S and southwest winds prevail particularly in the N; southeasterlies are also common in the S. Northerlies are a secondary wind.

Pilotage.—The waters of Lake Michigan are Great Lakes undesignated waters; registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot or other officer qualified for Great Lakes undesignated waters. Registered pilots for Lake Michigan are supplied by Western Great Lakes Pilots Association (See Appendix A for addresses.) Pilot exchange points are off Port Huron at the head of St. Clair River in about 43°05’30”N., 82°24’42”W. and at De Tour, MI, at the entrance to St. Marys River. Three pilot boats are at Port Huron; HURON BELLE has an international orange hull with an aluminum cabin, and HURON MAID and HURON LADY each have an international orange hull with a white cabin. The pilot boat at De Tour, LINDA JEAN, has a green hull and a white cabin. (See Pilotage, chapter 3, and 46 CFR 401, chapter 2.)

Principal ports.—Most of the harbors on the east side of Lake Michigan are within the mouths of small rivers or in small lakes connected to Lake Michigan by an entrance channel. Parallel piers have been constructed at the mouths of these harbors to aid in carrying the bar into deeper water and to lessen the need for dredging in the harbor entrance. In addition, several harbors along this shore have been provided with stilling basins formed by breakwaters that converge to an entrance opening in deep water beyond the parallel piers. These basins dissipate the force of storm generated waves to prevent them from being conducted through the confined channels between the piers and into the harbors.

The harbors on the west side of the lake are generally at the mouths of small rivers, the only large streams being the Fox and Menominee Rivers which empty into Green Bay. The entrances to the harbors are generally protected by parallel piers, and some have been provided with stilling basins. Some harbor entrances are protected by detached breakwaters. Outer harbors enclosed by breakwaters have been constructed at Calumet Harbor and Milwaukee. Entirely artificial harbors, with basins enclosed by piers and breakwaters, are at Burns International Harbor, Gary, Buffington, Indiana Harbor, Great Lakes, Waukegan, Port Washington, and Port Inland.

The most important harbors in Lake Michigan are Muskegon, Calumet, Chicago, Milwaukee, Kenosha, and Green Bay. Drydocking facilities for deep-draft vessels are at Sturgeon Bay.
NOAA's navigation managers serve as ambassadors to the maritime community. They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation.

For additional information, please visit nauticalcharts.noaa.gov/service/navmanagers.

To make suggestions or ask questions online, go to nauticalcharts.noaa.gov/inquiry.
To report a chart discrepancy, please use ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx.

Lateral System As Seen Entering From Seaward on navigable waters except Western Rivers

For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at http://www.navcen.uscg.gov
NOTE 8:
Mariners should use caution as military craft may be operating within the area. For further information, consult the U.S. Coast Guard Local Notice to Mariners.

WARNING:
Unexploded ordnance may exist in this area. Anyone finding unexploded ordnance should notify the nearest U.S. Coast Guard or law enforcement facility.
NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 25 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

- South Ste. Marie, MI: KIG-74, 162.550 MHz
- Marquette, MI: KIG-96, 162.550 MHz
- Sister Bay, WI: WKN-69, 162.425 MHz
- Green Bay, WI: KIN-69, 162.550 MHz
- Sault Ste. Marie, MI: WWQ-91, 162.425 MHz
- Milwaukee, WI: KCC-60, 162.400 MHz
- Chicago, IL: KRD-39, 162.500 MHz
- South Bend, IN: WAI-77, 162.400 MHz
- Canarsie, MI: WAF-94, 162.475 MHz
- Grand Rapids, MI: KIR-40, 163.550 MHz
- Hesperia, MI: WNP-26, 162.475 MHz
- Traverse City, MI: KIN-22, 163.400 MHz
- Gaylord, MI: WNP-70, 162.900 MHz

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION

Improved charting shown by broken lines are subject to shoaling, particularly at the edges.

RACING BUOYS

Racing buoys within the limits of this chart are not shown here. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial VHF stations are subject to error and should be used with caution.
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Note: Chart grid lines are aligned with true north.
SOUNDINGS IN FEET IN BLUE TINT AREAS AND IN FATHOMS ELSEWHERE

NOTES


OMISSION OF DETAIL: Owing to the small scale, many aids to navigation, depths, contours, and topographic features have been omitted. For detailed charting consult Coast and Harbor Charts.

AIDS TO NAVIGATION: Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

SYMBOLS AND ABBREVIATIONS: For complete list of symbols and abbreviations see Chart No. 1.

BROKERS AND OVERHEAD CABLE CLEARANCES: When the water surface is above Low Water Datum, brooks and overhead cables are required correspondingly. For clearance see U.S. Coast Pilot 9.

AUTHORITIES: Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

Sailing courses are recommended by the Lake Centers Association and the Chamber of Marine Commissioners as voluntary guidance for course to steer with navigation safety and Collision Regulations always taking priority.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 6 for important supplemental information.

WARNING

The position marker will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

SCALE 1:500,000

LAKE MICHIGAN - HURON

Average levels (2005-2013):
Low Water Datum, which is the plane of reference for the levels shown on the chart hydograph, is also the plane of reference for the standard depth. If the lake level is above the Low Water Datum, the charted depth is correspondingly greater than the charted depth.

Lake Michigan
SOUNDINGS IN FEET & FATHOMS - SCALE 1:500,000
VHF Marine Radio channels for use on the waterways:
Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-boat.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures
• Make sure radio is on.
• Select Channel 16.
• Press/Hold the transmit button.
• Clearly say: “MAYDAY, MAYDAY, MAYDAY.”
• Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
• Release transmit button.
• Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References
Nautical chart related products and information — http://www.nauticalcharts.noaa.gov
Interactive chart catalog — http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
Chart and chart related inquiries and comments — http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections) — http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online — http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents — http://tidesandcurrents.noaa.gov
Marine Forecasts — http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center — http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions — http://www.nowcoast.noaa.gov/
National Hurricane Center — http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center — http://ptwc.weather.gov/
Contact Us — http://www.nauticalcharts.noaa.gov/staff/contact.htm

This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

 NOAA’s Office of Coast Survey
The Nation’s Chartmaker